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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,340	11/09/2001	Jason K. Trotter	ITWO:0014/YOD 13084	5849

7590 01/22/2004

Tait R. Swanson  
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P.O. Box 692289  
Houston, TX 77269-2289

EXAMINER
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ILAN, RUTH

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/037,340

Applicant(s)

TROTTER ET AL.

Examiner

George D. Spisich

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 20,22,23,36,38 and 54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19,21,24-35,37,39-53,55 and 56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19, 21, 24-35, 37, 39-53, 55 and 56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 17, 31, 43 and 49 are unclear. It is unclear to claim that the stabilizer system stabilizes independent from shock absorption for the reason that the invention itself would inherently absorb shock to at least some degree and not be completely free from shock absorption. Furthermore, it is unclear if there is being claimed a separate shock absorbing system on the vehicle. Claim 31 positively claims a separate shock absorbing system, but Elements 20 are springs and cannot accurately be called a shock absorption system.

Claim 12 is unclear. It is not accurate and clear to claim that the "variable chamber assembly is disposed along each of the first and second conduits". As this claim reads, it would require the chambers to be disposed along or between portions of the conduits. This is not the case. The chambers are within the cylinders and are not accurately able to be claimed as being disposed along the conduits.

Claim 13 is unclear. The variable volume chamber does not comprise a diaphragm. The piston assembly or intermediate chamber comprises a diaphragm. If "variable volume chamber" is changed to "intermediate chamber" there will be a problem with "lack of antecedent basis" since the intermediate chamber has not yet been claimed in claims that claim 13 depends from. Again, the variable volume chamber is a structure separate from the piston or intermediate chamber and therefore can not clearly and accurately be claimed to comprise a diaphragm. It may be proper to claim that the piston-cylinder assemblies comprise a diaphragm.

Claim 14 is unclear. The variable volume chamber does not comprise a spring loaded piston assembly. The intermediate chamber comprises a spring loaded piston assembly. If "variable volume chamber" is changed to "intermediate chamber" there will be a problem with "lack of antecedent basis" since the intermediate chamber has not yet been claimed in claims that claim 14 depends from. As stated above, it may be proper to claim that the piston-cylinder assemblies comprise a spring-loaded piston.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10-12, 15, 17-19, 21, 28, 43-50, 53, 55 and 56, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by MacLeod (USPN 5,794,966).

MacLeod discloses a vehicle suspension stabilizer system comprising a plurality of piston cylinder assemblies (10a' and 10b') comprising a closed cylinder, a piston assembly movably disposed in the closed cylinder first and second variable chambers (18 and away from piston and rod) disposed on opposite sides of the piston assembly. MacLeod also discloses a linkage members (28) extending through a wall of the closed cylinder for coupling to a first and second movable suspension member (see Figs. 6b-6d and 7) where multiple sets of the variable chambers are fluidly and inversely coupled with conduits (38) to distribute forces between the movable suspension members.

MacLeod discloses that the resistance between the piston assembly pairs is fluid. Also, it is disclosed that the piston cylinder assemblies could be arranged and fluidly interconnected between passenger and driver sides of a vehicle to distribute lateral loads encountered by the vehicle (as shown in Fig. 6b) or the assemblies could be arranged and fluidly interconnected between forward and rearward portions of a vehicle to distribute longitudinal loads encountered by the vehicle (as shown in Figs. 6c or 6d).

It is understood that the suspension stabilizer system as disclosed by MacLeod would have a method of assembly/forming and a method of operation as claimed in method claims 49+.

Claims 1-5, 10-12, 15, 17-19, 21, 28, 31-35, 37, 39-50, 53, 55 and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Heyring (USPN 5,447,332).

Heyring discloses a vehicle suspension stabilizer system comprising a plurality of piston cylinder assemblies (13,14,17,18) comprising a closed cylinder, a piston assembly movably disposed in the closed cylinder first and second variable chambers disposed on opposite sides of the piston assembly. Heyring also discloses a linkage members extending through a wall of the closed cylinder for coupling to a first and second movable suspension member (see Fig. 1) where multiple sets of the variable chambers are fluidly and inversely coupled with conduits (8,8a,10,10a) to distribute forces between the movable suspension members.

Heyring discloses that the resistance between the piston assembly pairs is fluid. Also, the piston cylinder assemblies are arranged and fluidly interconnected between passenger and driver sides of a vehicle to distribute lateral loads encountered by the vehicle and fluidly interconnected between forward and rearward portions of a vehicle to distribute longitudinal loads encountered by the vehicle.

The system of Heyring is structurally and functionally identical to applicant's invention and operates "separate from a shock absorption system". Since there is no shock absorption system disclosed in Heyring, it "operates separate from a shock absorption system". It is then considered to operate independent from shock absorption and mounted separate from a shock absorption system.

It is understood that the suspension stabilizer as disclosed by Heyring would have a method of assembly/forming and a method of operation as claimed in method claims 31+ and 49+.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9, 14, 24-27, 30, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod in view of de Molina (USPN 5,823,306).

MacLeod has been discussed in a prior rejection. However, MacLeod does not disclose a piston assembly comprising first and second pistons disposed about an intermediate chamber, and a resistance mechanism being a spring disposed in the intermediate chamber.

de Molina discloses a stabilizer having a piston assembly disposed in a cylinder and the piston assembly comprises first and second pistons (80 and 90) disposed about an intermediate chamber and a spring (56) assembly disposed in the intermediate chamber for providing enhanced stabilizing characteristics.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the piston of MacLeod by providing a piston assembly having first and second pistons disposed about an intermediate chamber with a spring resisting mechanism provided in the intermediate chamber as taught by de Molina for providing a stabilizer having enhanced stabilizing characteristics.



Claims 6-9, 14, 24-27, 30, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring in view of de Molina (USPN 5,823,306).

Heyring has been discussed in a prior rejection. However, Heyring does not disclose a piston assembly comprising first and second pistons disposed about an intermediate chamber, and a resistance mechanism being a spring disposed in the intermediate chamber.

de Molina discloses a stabilizer having a piston assembly disposed in a cylinder and the piston assembly comprises first and second pistons (80 and 90) disposed about an intermediate chamber and a spring (56) assembly disposed in the intermediate chamber for providing enhanced stabilizing characteristics.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the piston of Heyring by providing a piston assembly having first and second pistons disposed about an intermediate chamber with a spring resisting mechanism provided in the intermediate chamber as taught by de Molina for providing a stabilizer having enhanced stabilizing characteristics.

Claims 13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod in view of Lutz (USPN 3,625,321).

MacLeod has been discussed in a prior rejection. However, MacLeod does not disclose a resistance mechanism comprising a diaphragm.

Lutz discloses a stabilizer having a piston assembly in a cylinder and the piston assembly comprises first and second piston (2 and 3) disposed about an intermediate chamber (10) with a diaphragm (11) disposed within the intermediate chamber and being a resistance mechanism to enhance the stabilizing characteristics of the assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the piston of MacLeod to provide a piston assembly having first and second pistons disposed about an intermediate chamber with a diaphragm resisting mechanism provided in the intermediate chamber as taught by Lutz for providing a stabilizer having enhanced stabilizing characteristics.

Claims 13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring in view of Lutz (USPN 3,625,321).

Heyring has been discussed in a prior rejection. However, Heyring does not disclose a resistance mechanism comprising a diaphragm.

Lutz discloses a stabilizer having a piston assembly in a cylinder and the piston assembly comprises first and second piston (2 and 3) disposed about an intermediate chamber (10) with a diaphragm (11) disposed within the intermediate chamber and being a resistance mechanism to enhance the stabilizing characteristics of the assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the piston of Heyring to provide a piston assembly having

first and second pistons disposed about an intermediate chamber with a diaphragm resisting mechanism provided in the intermediate chamber as taught by Lutz for providing a stabilizer having enhanced stabilizing characteristics.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod.

MacLeod has been discussed in a prior rejection. MacLeod does not disclose a stabilizer arrangement having variable chamber that comprise a gas.

Examiner takes Official Notice that it is well known in the vehicle stabilizer art to use air or a gas as the fluid within the stabilizing arrangement.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring.

Heyring has been discussed in a prior rejection. Heyring does not disclose a stabilizer arrangement having variable chamber that comprise a gas.

Examiner takes Official Notice that it is well known in the vehicle stabilizer art to use air or a gas as the fluid within the stabilizing arrangement.

Claims 1-5, 10-12, 15, 17-19, 21, 28, 31-35, 37, 39-50, 53, 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring in view of Kindermann et al. (USPN 5,066,041)

Heyring has been discussed in a prior rejection.

With respect to claims 1-5, 10-12, 15, 17-19, 21, 28, 31-35, 37, 39-50, 53, 55 and 56 as discussed above, even though Heyring discloses a system which "operates separate from a shock absorption system" and/or "mechanically coupled separate from a shock absorption system", Kindermann et al. discloses a stabilization suspension with conduits (5) to connect the spring (7) and also teaches a shock absorption system made up of a plurality of dampers (14) which are separate from the stabilization suspension.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the stabilization suspension of Heyring by the addition of a separate shock absorption system as taught by Kindermann et al. so as to enhance the shock absorbing characteristics of the suspension system.

Claims 6-9, 14, 24-27, 30, 51 and 52 rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring in view of Kindermann et al. as applied to claims 1-5, 10-13, 15, 17-19, 21, 28, 31-35, 37, 39-50, 53, 55 and 56 above, and further in view of de Molina (USPN 5,823,306).

Heyring and Kindermann et al. have been discussed in a prior rejection. However, Heyring does not disclose a piston assembly comprising first and second pistons disposed about an intermediate chamber, and a resistance mechanism being a spring disposed in the intermediate chamber.

de Molina discloses a stabilizer having a piston assembly disposed in a cylinder and the piston assembly comprises first and second pistons (80 and 90) disposed about

an intermediate chamber and a spring (56) assembly disposed in the intermediate chamber for providing enhanced stabilizing characteristics.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the piston of Heyring by providing a piston assembly having first and second pistons disposed about an intermediate chamber with a spring resisting mechanism provided in the intermediate chamber as taught by de Molina for providing a stabilizer having enhanced stabilizing characteristics.

Claims 13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring in view of Kindermann et al. as applied to claims 1-5, 10-13, 15, 17-19, 21, 28, 31-35, 37, 39-50, 53, 55 and 56 above, and further in view of Lutz (USPN 3,625,321).

Heyring and Kindermann et al. have been discussed in a prior rejection. However, Heyring does not disclose a resistance mechanism comprising a diaphragm.

Lutz discloses a stabilizer having a piston assembly in a cylinder and the piston assembly comprises first and second piston (2 and 3) disposed about an intermediate chamber (10) with a diaphragm (11) disposed within the intermediate chamber and being a resistance mechanism to enhance the stabilizing characteristics of the assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the piston of Heyring to provide a piston assembly having first and second pistons disposed about an intermediate chamber with a diaphragm

resisting mechanism provided in the intermediate chamber as taught by Lutz for providing a stabilizer having enhanced stabilizing characteristics.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring in view of Kindermann et al.

Heyring has been discussed in a prior rejection. Heyring does not disclose a stabilizer arrangement having variable chamber that comprise a gas.

Examiner takes Official Notice that it is well known in the vehicle stabilizer art to use air or a gas as the fluid within the stabilizing arrangement.

### ***Response to Arguments***

With respect to Applicant's argument that the system of MacLeod includes shock absorbers and therefore the system of MacLeod does not stabilize independent from shock absorption, Examiner disagrees and maintains the rejection. Although MacLeod calls the elements shock absorbers, they are functionally and structurally identical as Applicant's invention. Similarly, they would only absorb shock as the invention would absorb shock.

With respect to Applicant's argument that the deficiencies in MacLeod are not addressed when combining with various features of other references in 103 rejections, Examiner disagrees and maintains the rejection. The deficiencies of MacLeod, such as

the intermediate chamber (de Molina), and the diaphragm (Lutz), are properly addressed and these features are properly disclosed in de Molina and Lutz such that a modification of the element of MacLeod is proper and motivation given. Similarly, there references are properly teaching the modifications made to the elements of Heyring in 103 rejections made in this action.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sahagian (USPN 2,869,892), Capgras (USPN 3,736,000), Eisenberg et al. (USPN 4,607,861).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (703) 305-6495. The examiner can normally be reached on Monday to Friday 6:00-3:30 except alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-1113.

Gds  
January 7, 2004

 1/12/03  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600